

US EPA ARCHIVE DOCUMENT

**Technical Support Document for 2008 Ozone NAAQS Designation for  
the United States Virgin Islands**

**Virgin Islands  
Area Designations for the  
2008 Ozone National Ambient Air Quality Standards**

No areas of the U.S. Virgin Islands violate the 2008 National Ambient Air Quality Standards for ozone (2008 NAAQS). Monitoring from the IMPROVE network shows that concentrations of ozone are well under the 0.075ppm NAAQS.

**Technical Analysis for the Virgin Islands**

The historical air quality data from early 2000's at the IMPROVE monitoring site on St. John in the United States Virgin Islands recorded ozone concentrations well under the 0.075ppm NAAQS. The only factors to review are 1) the air quality data and 2) whether the Virgin Islands impact any nonattainment areas.

In a February 3, 2009 letter to the USEPA, the United States Virgin Islands Government recommended that all of the Virgin Islands be designated as attainment for the 2008 ozone NAAQS based on historical air quality data from the IMPROVE network. These data are from Federal Reference Method (FRM) monitors sited and operated in accordance with US guidelines for the IMPROVE network .

No comments or further correspondence on EPA's proposed designation were received from the public or the Virgin Islands Government.

After considering the recommendation from the Virgin Islands' Government and based on EPA's technical analysis described below, EPA will designate all of the United State Virgin Islands as attainment/unclassified for the 2008 ozone NAAQS.

**Factor Assessment**

***Factor A: Air Quality Data***

For this factor, we considered 8-hour ozone design values (in ppm) for air quality monitors in the Virgin Islands. A monitor's DV is the metric or statistic that indicates whether that monitor attains a specified air quality standard. The 2008 ozone NAAQS are met when the annual fourth-highest daily maximum 8-hour average concentration, averaged over 3 years is 0.075 ppm or less. A DV is only valid if minimum data completeness criteria are met. See 40 CFR part 50 Appendix P. Where several monitors are located in a county (or a designated nonattainment area or maintenance area), the DV for the county or area is determined by the monitor with the highest level.

The data for the IMPROVE ozone monitor on St. John in the Virgin Islands is summarized below and it the attached PDF file from EPA's Air Quality System database.

Table 2. Air Quality Data.

Location – St. John	Data Capture (Percent)	4 <sup>th</sup> Highest Concentration (ppb)
1998	48	39
1999	97	49
2000	96	49
2001	86	43
2002	80	48
2003	77	43

For the five years from 1999 through 2003 data capture is more than the EPA minimum of 75 percent in each year. Data for this site meets EPA's completeness requirements and are well under the 75ppb ozone NAAQS. See the attached report from EPA's Air Quality System for the data used for this table.



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The ozone monitor at the IMPROVE site was discontinued after 2003, because concentrations were so low that no threat to human health or welfare was likely. That assessment is still supported since the design value is 30ppb lower than the 2008 NAAQS. The islands are sufficiently small and separated that ozone concentrations of concern are not likely, even if emissions were to increase markedly.

### ***Factor B: Impact on other areas***

As part of EPA's evaluation of Section 110 ozone transport State Implementation Plans, EPA determined that the Virgin Islands are too far from any other nonattainment areas to cause or contribute to violations of the ozone NAAQS in these areas. The nearest nonattainment areas are in the eastern portion of the continental United States, over a thousand miles from San Juan, Puerto Rico.



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### **Conclusion**

Based on the assessment of factors described above, EPA has concluded that the United States Virgin Islands have met the CAA criteria for attainment of the 2008 ozone NAAQS. Historical ozone monitoring from the IMPROVE network show attainment of the ozone standard by a wide margin. In addition, the Virgin Islands are far enough from other ozone nonattainment areas that they do not cause or contribute to any nonattainment for the 2008 ozone NAAQS.